

Date: Friday, 19/12/2008 8:33:05 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : 212/205 HIGH AFT X-TUBE ASSEMBLY
Job Number : 44193	
Estimate Number : 10257	
P.O. Number :	Part Number : D212664201
This Issue : 19/12/2008 S.O. No. :	Drawing Number : D212-664-241 REV C
Print Rev. : NC	Project Number : N/A
First Issue : // Type : CROSSTUBES	Drawing Revision : C
Previous Run : 44192	Material :
Written By :	Due Date : 09/01/2009 Qty: 1 Um: Each
Checked & Approved By : JUD 08.12.19	
Comment :	
: Est Rev:E 04.02.16 Reformat K/DS	
: Est Rev:F 06-03-29 Remove Coments on Pick List JLM	
: Est Rev:G 07-04-30 As per Rev C JLM	
: Est Rev:H 08-05-22 up date Qty of rubber cushion DD verified by:EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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KJ for JUD 09/01/21

**Comment:** DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D212-664-201CHG003

07/01/21

2.0	PACKAGING 1	PACKAGING RESOURCE #1
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**Comment:** PACKAGING RESOURCE #1

3.0	D212664201TRN	Crosstube Turning Detail
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch B-44156

MB 09-01-14

4.0	BENDING	BENDING MACHINE - SKIDTUBES
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**Comment:** BENDING MACHINE

Bend tube as per Dwg D212-664-241 using CNC bender program 212-af and Folio FT007

9-1-14

5.0	QC15	DIMENSIONAL CHECK OF X-TUBES
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**Comment:** DIMENSIONAL CHECK OF X-TUBES

09.01.15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-664-201 PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: 1A Date: 09-01-26

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>44193</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09.01.15	4	Tube is 0.146" high, above max tol, after bending.	GP 09.01.15 pu Q51042	Acceptable.	MP 09-01-15	S Sdals	GP 09.01.15 pu Q51042	S Sdals

NOTE: Date & initial all entries

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Job Number: 44193

Part Number: D212664201

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550 & DT8551

2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241

4-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241

MB
09-01-15

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of bending and drilling

MB
09-01-15

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

S 09/01/15 @

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/01/15 @

10.0

OUTSIDE SERV.11

OUTSIDE SERVICE -CROSSTUBES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038

Issue P/O: 8000

LPI as per ASTM 1417 Level 2

Attach copy of NDT results to work order

U 09-01-19

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage Ensure copy of NDT results attached to work order.

U 09/01/15 @

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 212/205 HIGH AFT X-TUBE ASSEMBLY

Job Number: 44193

Part Number: D212664201

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

AN960JD616

Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Washer

Batch: M11002

25.0

MS21042L6

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Nut

Batch: 19099

26.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

27.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Identify and pack for shipping as per PPP D212-664-201

28.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF
09-01-20

B44193 D212-664-201



LIQUID PENETRANT TEST REPORT

P- 149

PAGE 1 OF

CLIENT DART AEROSPACE DATE JAN 16-2009 TIME AM ☐ PM
ATTENTION LINDA LACELLE ACUREN JOB No. 188-C9-001278
ADDRESS 1270 ABERDEEN ST POWO No. 8000
HAWKES BURY ONT WORK LOCATION MAIN SHOP-HAWKES
ACCEPTANCE STD. ASTM1417 REV./DATE 200
PROJECT X-TUBES Q51-038
ITEM(S) EXAMINED 7 ITEMS. FLUORESCENT DIE

JOB DESCRIPTION PROCEDURE No. LT-XXXX REV./DATE TECHNIQUE No. LT-XXXX-XXX REV./DATE

PART NO. MATERIAL ALODINED ALUM. THICKNESS
SCOPE WET FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT ON 100% EXTERNAL

TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EM
FAMILY BRAND MACNAFLUX BLACK LIGHT S/N 8171 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT
PENETRANT 2 LG7 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER
DEVELOPER SK052 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE FEB
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE ME
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

ITEM	PART IDENTIFICATION	ACCEPT/REJECT
1 -	<u>B-44125-B43052</u>	<u>SC 1</u>
1 -	<u>B-44156-44193</u>	<u>X</u>
1 -	<u>B-44155-44192</u>	<u>✓</u>
1 -	<u>B-44378-44139</u>	<u>✓</u>
1 -	<u>B-44379-44140</u>	<u>✓</u>
1 -	<u>B-43330-44384</u>	<u>✓</u>
1 -	<u>B-43051-44214</u>	<u>✓</u>

NO INDICATION WAS LOCATED ON THIS PIECE. WILL BE SANDED TO CO.FRM, AND REEXAMINED AT LATER DATE

44215
09/01/19

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be taken as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as to data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, express or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE Julie Dawson DTR # 19804
TECHNICIAN (SIGNATURE): Mike Johnston REPORT REVIEWED BY:
NAME (PRINT): Mike Johnston NAME INIT
1ST TECHNICIAN 2ND TECHNICIAN
CGSB LEVEL II SNT LEVEL CGSB LEVEL SNT LEVEL
CGSB REG. No 0666 CGSB REG. No



Client: DART AEROSPACE
Contact: LINDA LACELLE
Location: 1270 ABELDEEN
Description: X-TUBES 7 PCS.
Report #'s: F. L. PI

E- 19804

Form dated Sep 2005

Job #: 188-04-001278
Day: Sun Mon Tues
P.O. #: _____
Vehicle # 579

Date: JAN-16-2009
 Wed Thurs Fri Sat
 W.O #: 108-09-001278
 Camera #:

[illegible]

RADIOGRAPHIC UNIT PRICING

RADIOGRAPHIC UNIT PRICING																						
Weld Diameter											Long Seam						Circ. Seam					
Schedule / Thickness											Thickness						Thickness					
Quantity											Lineal Ft.						Lineal Ft.					

Film: _____ Pcs. 2 ¾ x 17"
 _____ Pcs. 3 ½ x 17"
 _____ Pcs. 4 ½ x 17"
 _____ Pcs. 14" x 17"
 _____ Pcs.

Consumables:

WET FLUORESCENT.
AS PEL -

Equipment:

Client Representative:

John Dawson

Place a check mark in each safety check area as completed

C/C	CAMERA CHECK
S/E	SAFETY EQUIPMENT CHECK
S/C	SURVEY METER CHECK
B/S	BARRRIER & SIGN INSTALLED
C/L	CAMERA LOCKED & SECURELY STORED
C/S	CAMERA SURVEYED AFTER EACH USE

EXPENSES

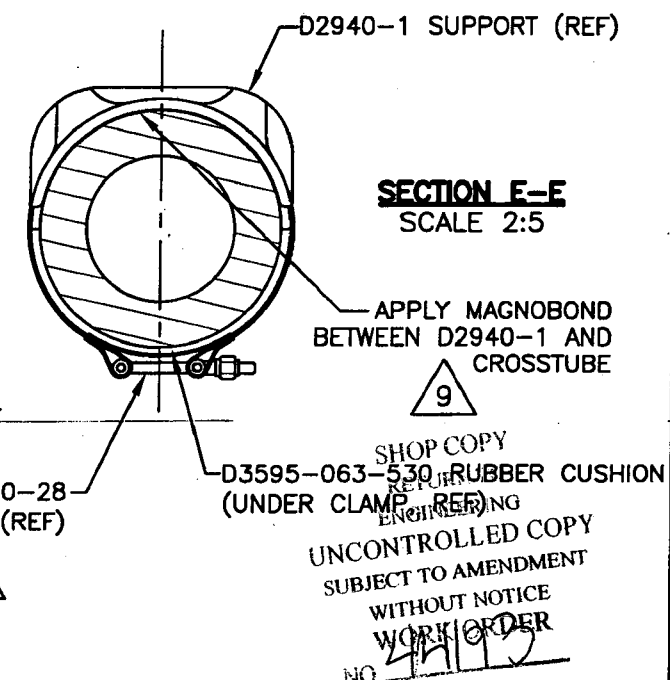
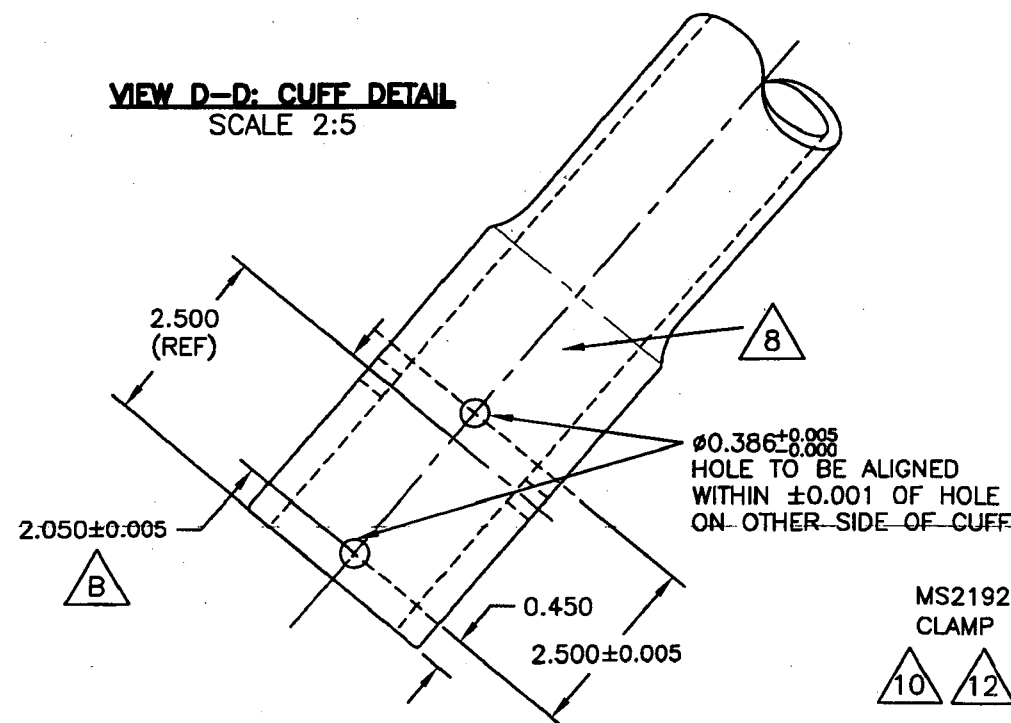
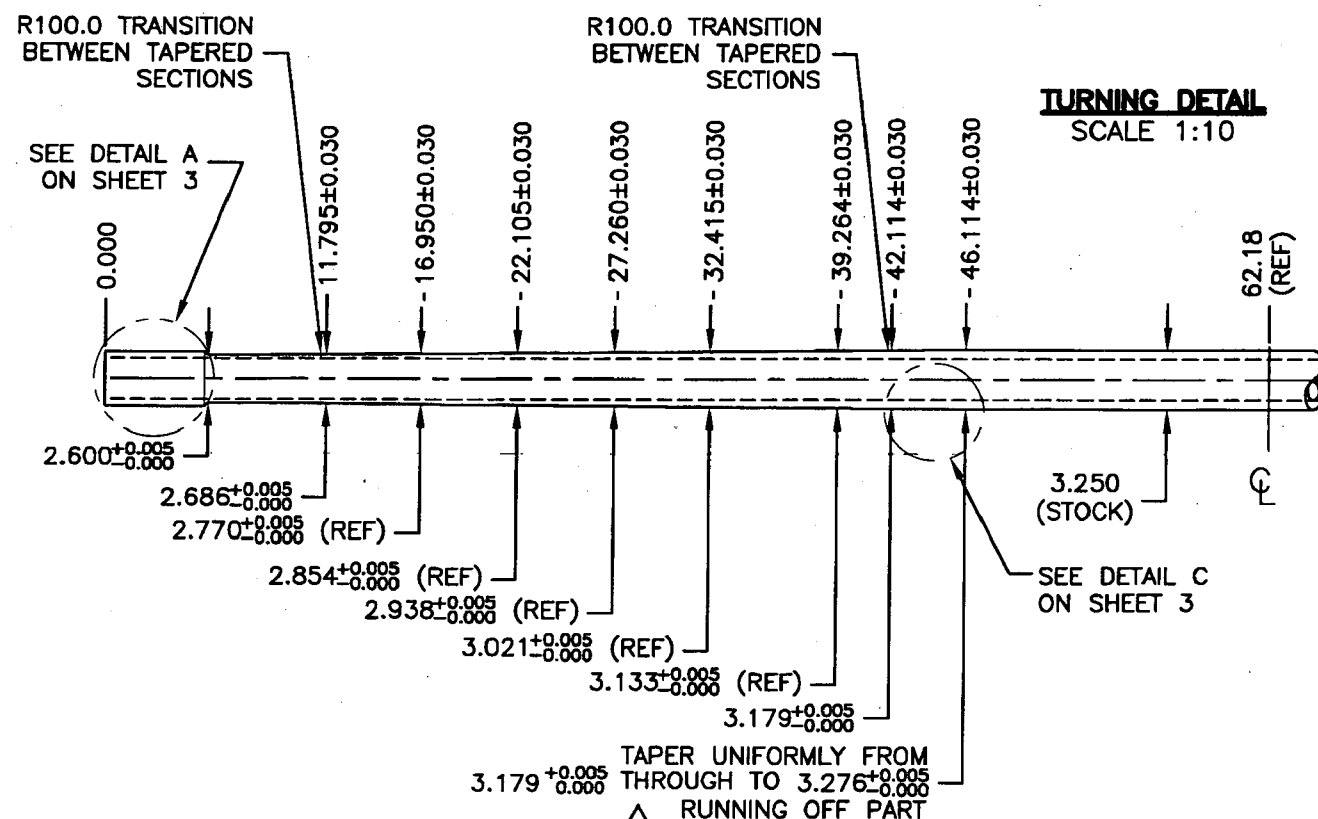
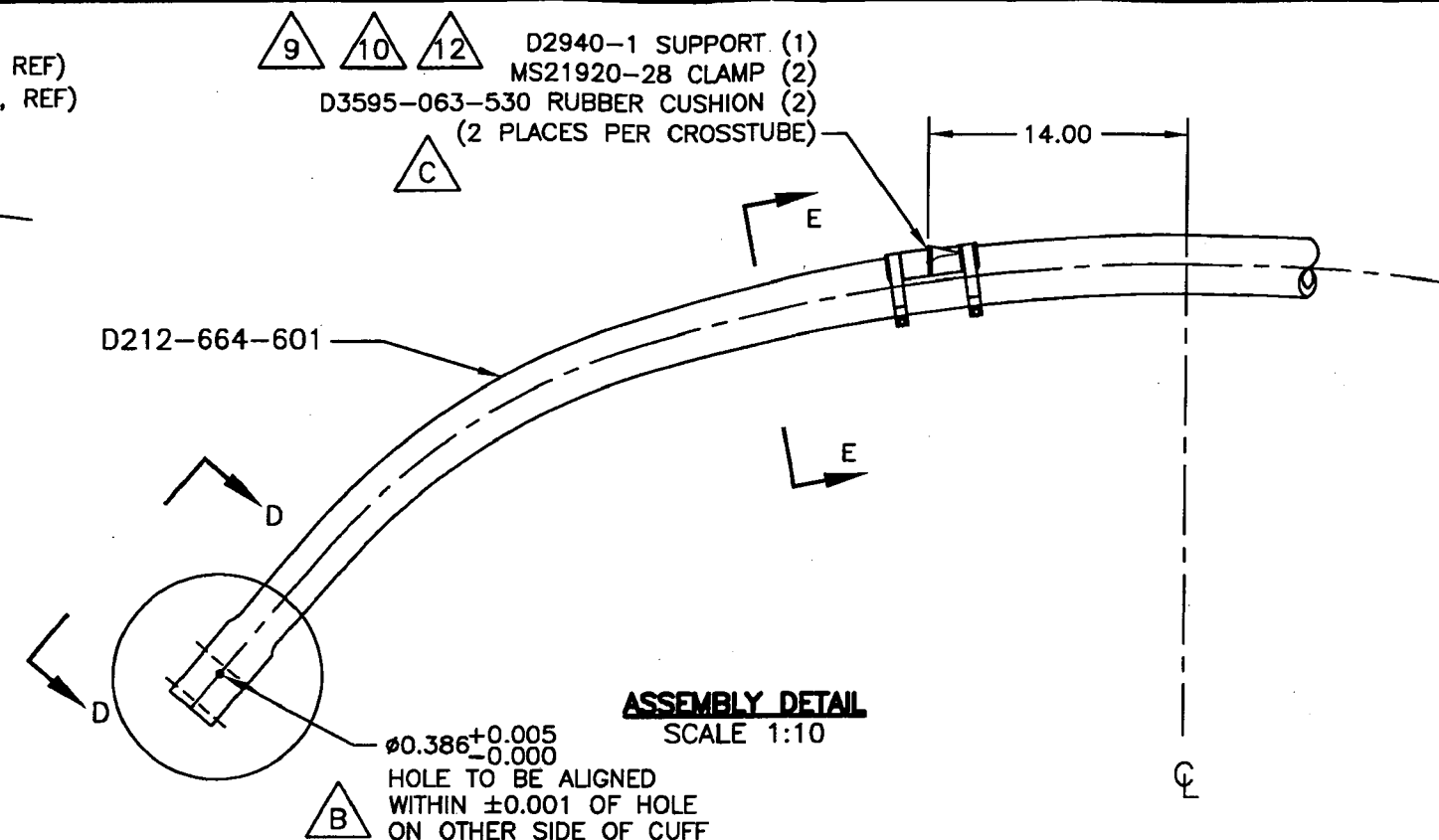
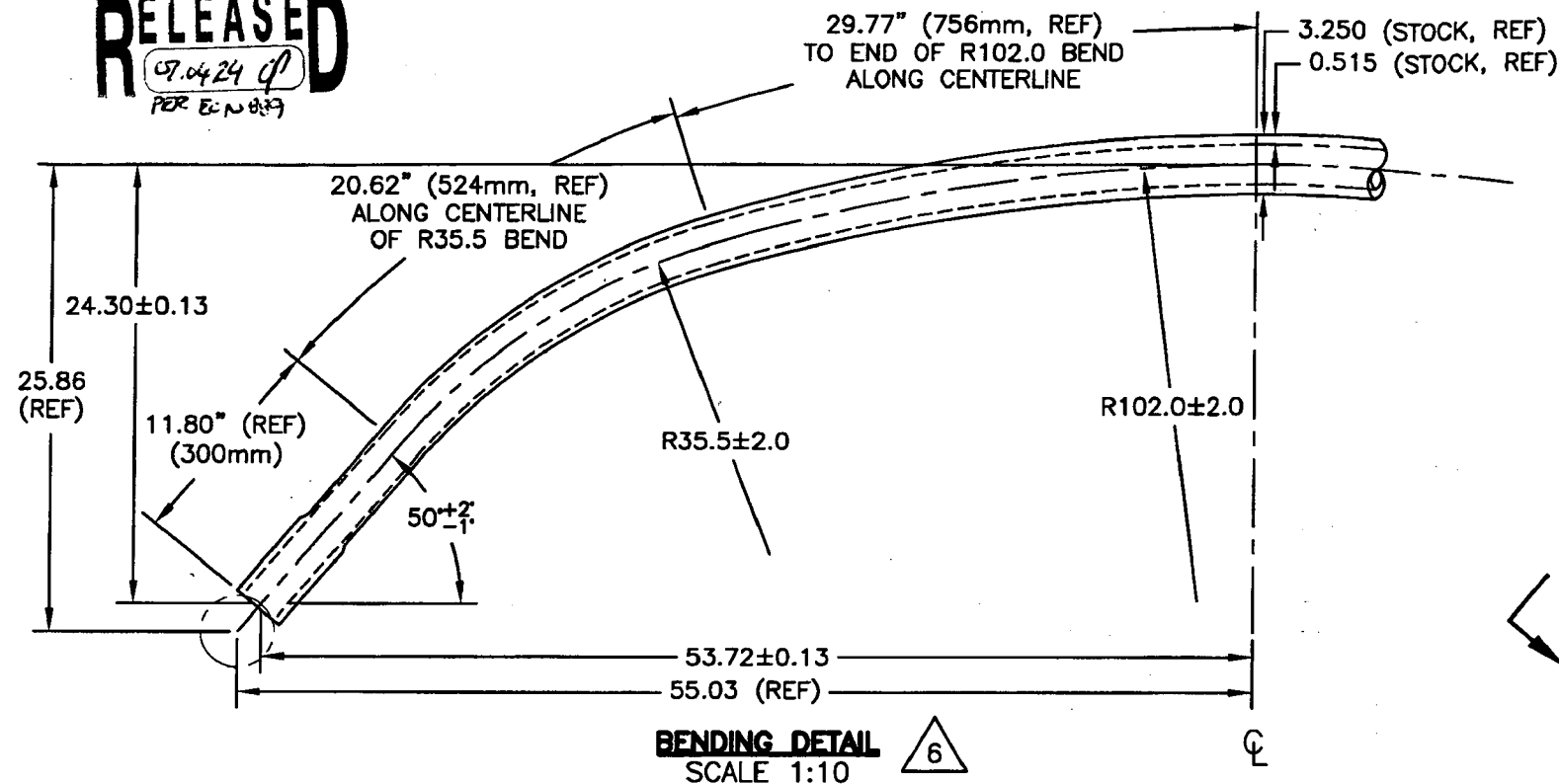
NOTES

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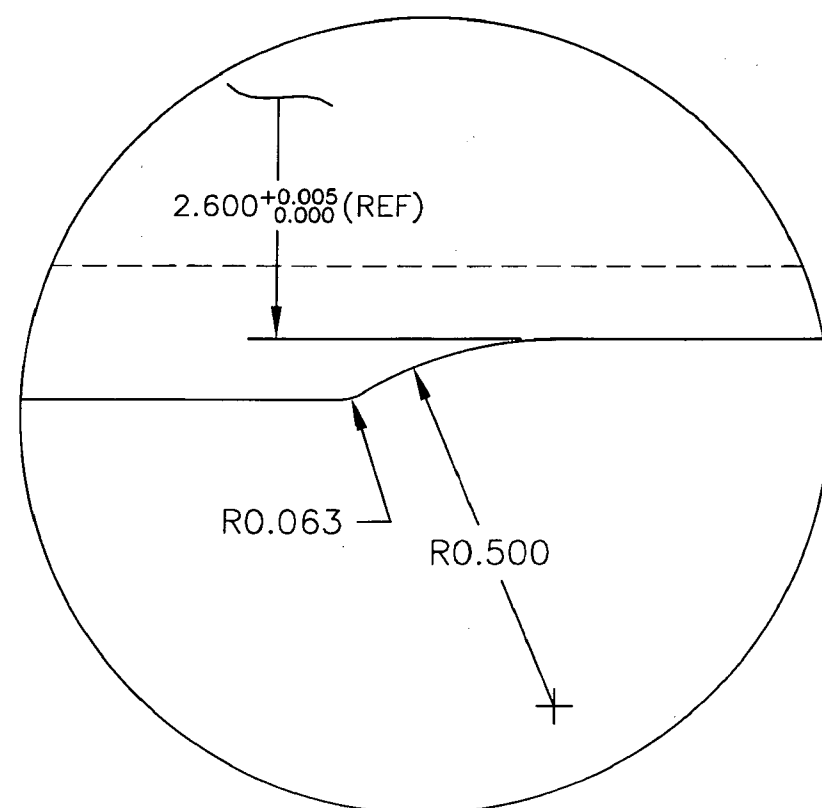
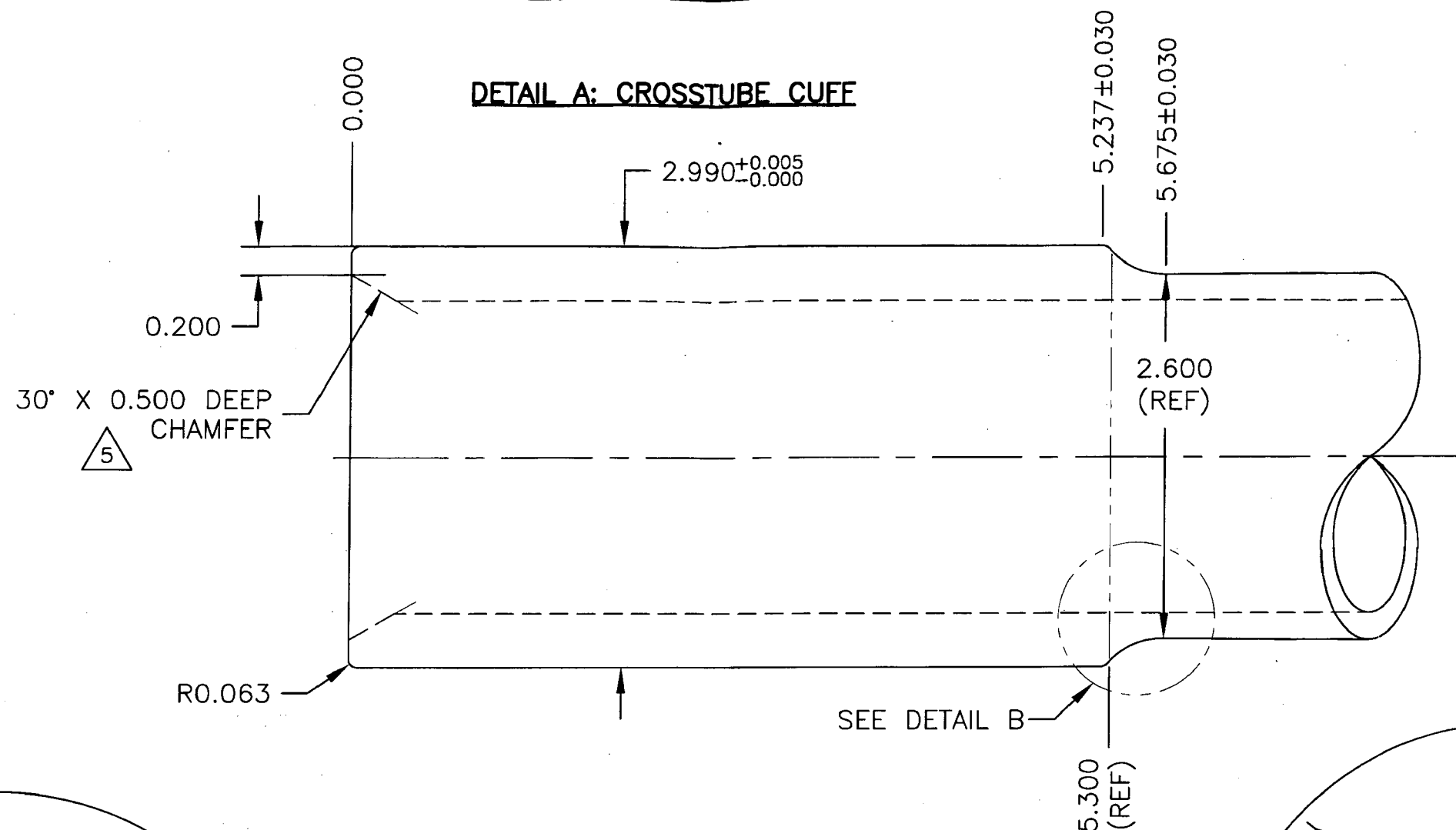


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	CHECKED J	APPROVED [Signature]			
	DATE 07.03.08	DRAWING NO. D212-664-241			REV. C SHEET 2 OF 3
	TITLE CROSSTUBE ASS'Y (205/212 HI AFT)		SCALE 1:10		

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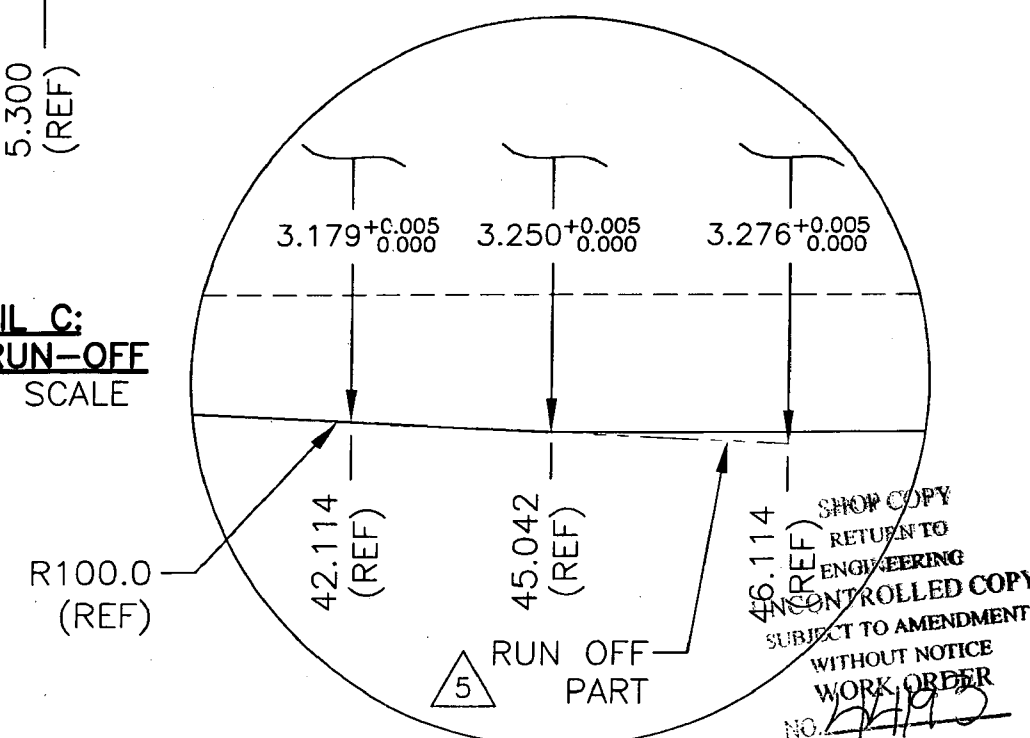
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DETAIL A: CROSSTUBE CUFF



**DETAIL B: CUFF
TRANSITION**
SCALE 4:1

**DETAIL C:
TAPER RUN-OFF**
NOT TO SCALE



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DATE 07.03.08	TITLE CROSSTUBE ASS'Y (205/212 HI AFT)	SCALE 1:1	

